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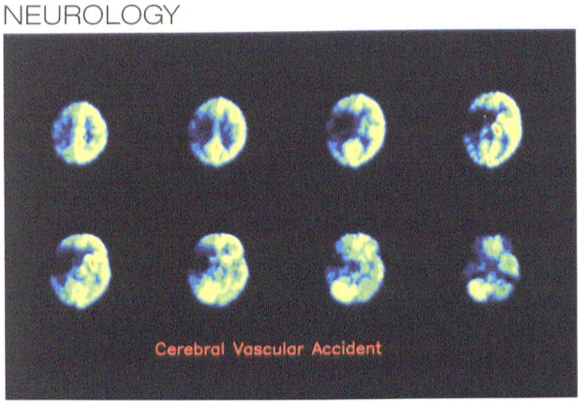

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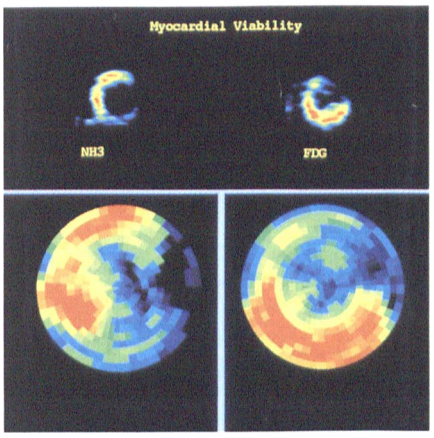

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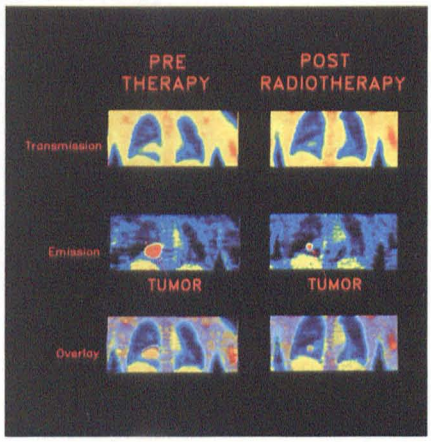

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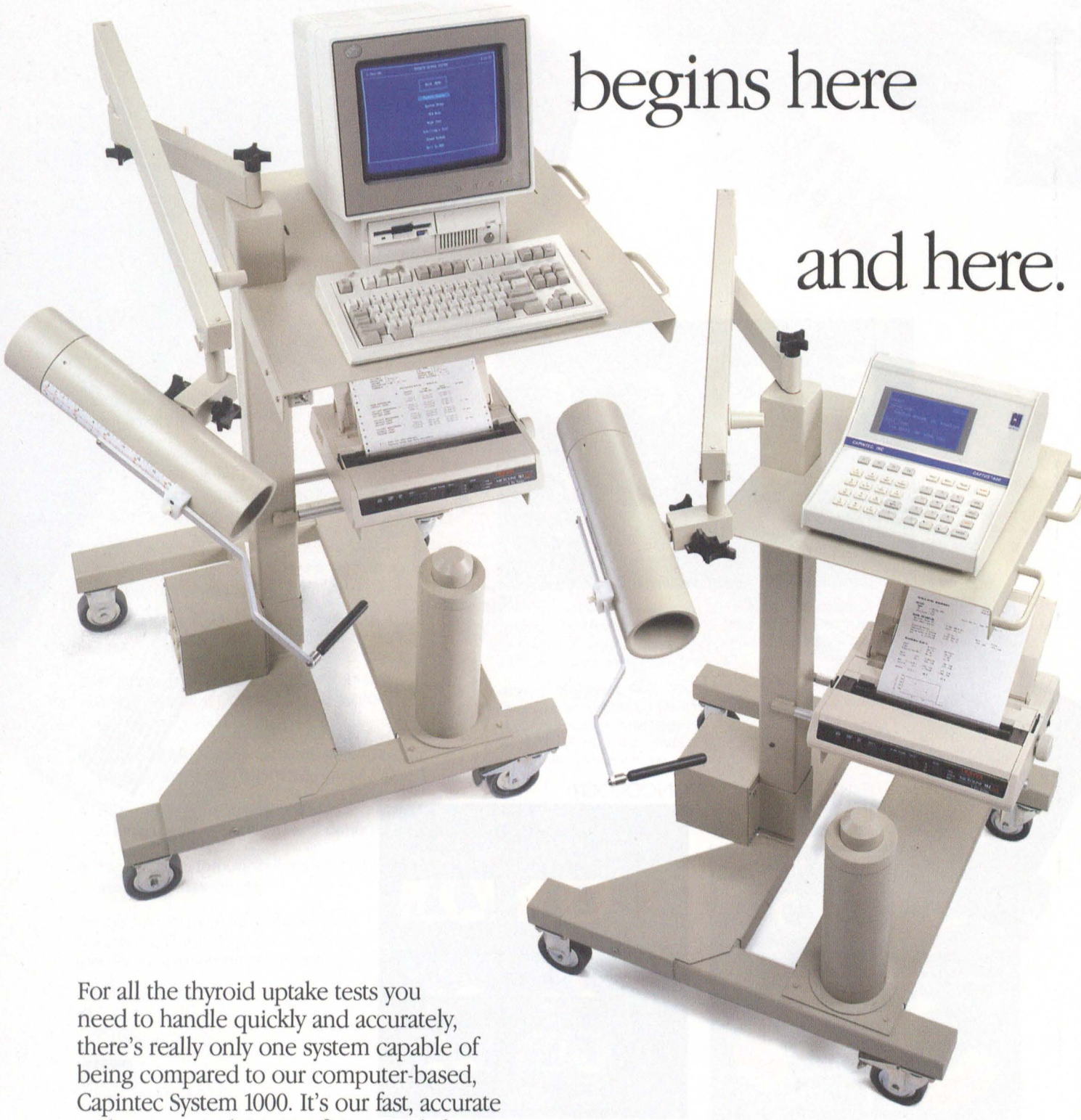

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Reality

Cogito, ergo sum (I think, therefore I am).
Rene Descartes

A realist lets circumstances decide which end of the telescope to look through.
Anon

Vision is the art of seeing things invisible.
Jonathan Swift

Perception and reality are not two peas in a pod.

Reality *is.*

The reality we perceive not only *is,* but is dependent on circumstances which vary from moment to moment. Given our limited sensorium, what simply is, is quickly transmogrified by a multi-tasking mind. To translate the what 'is' into something we can understand, the sensory input is projected on the canvas of the emotional background of the moment. Or at least, that's how I perceive it.

The system is convoluted. Yet the system has an evolutionary advantage. If we faced reality head on and simply experienced things as they are, without processing the material, our ability to interpret and analyze would be lost. We would simply be machines, tallying data, devoid of a sense of wonder, and disinterested in comparative concepts such as beauty and joy.

Of course, looking at this from another angle, our inability to refrain from colorizing reality makes it possible to ask about the actual basis of our own reality. As Alan Watts suggests, do we only see white because there is black, or good because there is bad? To discern the truth, we need to collect many samples and interview many witnesses. After careful analysis, we may approach truth asymptotically.

An awareness of our subjective state is not enough, just as one carefully constructed experiment is never enough to reveal the complete picture. As in the fable of the blind man and the elephant, many results must be knit together to first begin to understand what we are actually seeing, or feeling.

So it is in science, and so it is in publishing.

To help us understand that the reality of Nuclear Medicine, as you see it, is similar to the way we perceive it, we seek your help. In this month's issue of the *Journal,* there is a reader survey form. If you could take a few moments to fill it out, and send or FAX your perceptions to us, we will continue to try and make the *Journal's* realities more closely resemble your expectations.

Of course expectations are the enemy of perception. But that's another story. . .

H. William Strauss
Editor, The Journal of Nuclear Medicine

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In This Month's Issue of

JNM

Cyclic Oral Phosphate and Editronate Increase Femoral and Lumbar Bone Mineral Density and Reduce Lumbar Spine Fracture Rate Over Three Years

Forty post-menopausal women with osteoporosis were treated with a sequential, cyclic regimen of oral phosphate for 3 days, etidronate for 2 wk, and calcium salt for 13 wk. The cycle was repeated for 3 yr and the patients were rescanned after every other cycle..... *Page 1*

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An Instant Kit Method for Labeling Antimyosin Fab' with Technetium-99m: Evaluation in an Experimental Myocardial Infarct Model

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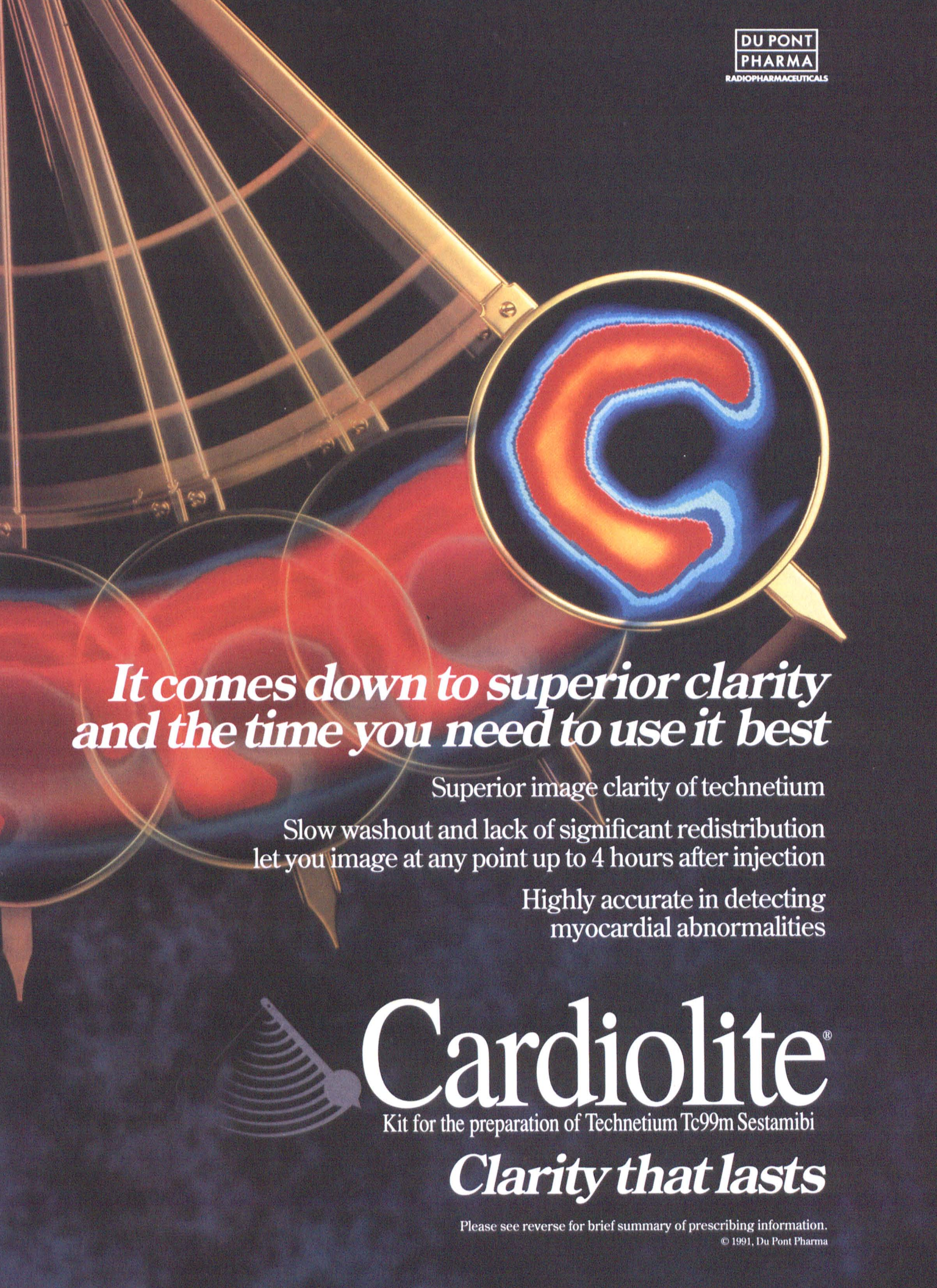
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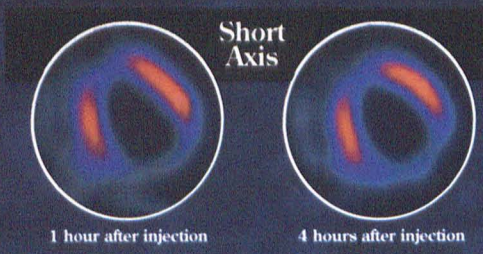

1 hour after injection 4 hours after injection

CARDIOLITE scans (SPECT) from a 62-year-old male with three prior myocardial infarctions (LFOV camera equipped with a high-resolution collimator, 64 x 64 matrix, 180° arc RAO to LPO, 64 projections, 25 s/projection).

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Brief Summary

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F O R D I A G N O S T I C U S E

DESCRIPTION: Each 5 mL vial contains a sterile, non-pyrogenic, lyophilized mixture of:

Tetrakis (2-methoxy isobutyl isonitrile) Copper (I) tetrafluoroborate - 1.0 mg
Sodium Citrate Dihydrate - 2.6 mg
L-Cysteine Hydrochloride Monohydrate - 1.0 mg
Mannitol - 20 mg
Stannous Chloride, Dihydrate, minimum ($SnCl_2 \cdot 2H_2O$) - 0.025 mg
Stannous Chloride, Dihydrate, ($SnCl_2 \cdot 2H_2O$) - 0.075 mg
Tin Chloride (Stannous and Stannic) Dihydrate, maximum (as $SnCl_2 \cdot 2H_2O$) 0.086 mg

Prior to lyophilization the pH is 5.3 to 5.9. The contents of the vial are lyophilized and stored under nitrogen.

This drug is administered by intravenous injection for diagnostic use after reconstitution with sterile, non-pyrogenic, oxidant-free Sodium Pertechnetate Tc99m Injection. The pH of the reconstituted product is 5.5 (5.0–6.0). No bacteriostatic preservative is present.

The precise structure of the technetium complex is $Tc99m[MIBI]_6^+$ where MIBI is 2-methoxy isobutyl isonitrile.

INDICATIONS AND USAGE: CARDIOLITE®, Kit for the preparation of Technetium Tc99m Sestamibi, is a myocardial perfusion agent that is useful in distinguishing normal from abnormal myocardium, and in the localization of the abnormality, in patients with suspected myocardial infarction. It is also useful in the evaluation of myocardial function using the first-pass technique.

CONTRAINDICATIONS: None known.

WARNINGS: In studying patients in whom cardiac disease is known or suspected, take care to assure continuous monitoring and treatment in accordance with safe, accepted clinical procedure.

PRECAUTIONS:

GENERAL

The contents of the vial are intended only for use in the preparation of Technetium Tc99m Sestamibi and are not to be administered directly to the patient without first undergoing the preparative procedure (as outlined in the full prescribing information).

Radioactive drugs must be handled with care and appropriate safety measures should be used to minimize radiation exposure to clinical personnel. Also, care should be taken to minimize radiation exposure to the patients consistent with proper patient management.

Contents of the kit before preparation are not radioactive. However, after the Sodium Pertechnetate Tc99m Injection is added, adequate shielding of the final preparation must be maintained.

The components of the kit are sterile and non-pyrogenic. It is essential to follow directions carefully and to adhere to strict aseptic procedures during preparation.

Technetium Tc99m labeling reactions involved depend on maintaining the stannous ion in the reduced state. Hence, Sodium Pertechnetate Tc99m Injection containing oxidants should not be used.

Technetium Tc99m Sestamibi should not be used more than six hours after preparation.

Radiopharmaceuticals should be used only by physicians who are qualified by training and experience in the safe use and handling of radionuclides and whose experience and training have been approved by the appropriate government agency authorized to license the use of radionuclides.

Carcinogenesis, Mutagenesis, Impairment of Fertility

In comparison with most other diagnostic technetium-labeled radiopharmaceuticals, the radiation dose to the ovaries (1.5 rads/30 mCi) is high. Minimal exposure (ALARA) is necessary in women of childbearing capability. (See Dosimetry subsection in DOSAGE AND ADMINISTRATION section.)

The active intermediate, $Cu(MIBI)_4BF_4$, was evaluated for genotoxic potential in a battery of five tests. No genotoxic activity was observed in the Ames, CHO/HPRT and sister chromatid exchange tests (all *in vitro*). At cytotoxic concentrations (≥ 20 μg/mL), an increase in cells with chromosome aberrations was observed in the *in vitro* human lymphocyte assay. $Cu(MIBI)_4BF_4$ did not show genotoxic effects in the *in vivo* mouse micronucleus test at a dose which caused systemic and bone marrow toxicity (9 mg/kg, >600 × maximal human dose).

Pregnancy Category C

Animal reproduction and teratogenicity studies have not been conducted with Technetium Tc99m Sestamibi. It is also not known whether Technetium Tc99m Sestamibi can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. There have been no studies in pregnant women. Technetium Tc99m Sestamibi should be given to a pregnant woman only if clearly needed.

Ideally, examinations using radiopharmaceuticals, especially those elective in nature, of a woman of childbearing capability, should be performed during the first few (approximately 10) days following the onset of menses.

Nursing Mothers

Technetium Tc99m Pertechnetate is excreted in human milk during lactation. It is not known whether Technetium Tc99m Sestamibi is excreted in human milk. Therefore, formula feedings should be substituted for breast feedings.

Pediatric Use

Safety and effectiveness in children below the age of 18 have not been established.

ADVERSE REACTIONS: During clinical trials, approximately 8% of patients experienced a transient metallic or bitter taste immediately after the injection of Technetium Tc99m Sestamibi. A few cases of transient headache, flushing and non-itching rash have also been attributed to administration of the agent. One patient demonstrated signs and symptoms consistent with seizure, 8 to 10 minutes after administration of the drug. No other adverse reactions specifically attributable to the use of Technetium Tc99m Sestamibi have been reported.

DOSAGE AND ADMINISTRATION: The suggested dose range for I.V. administration to be employed in the average patient (70 kg) is:

370 to 1110 MBq (10 to 30 mCi)

The dose administered should be the lowest required to provide an adequate study consistent with ALARA principles (See also PRECAUTIONS).

When used in the diagnosis of myocardial infarction, imaging should be completed within four hours after administration (see also CLINICAL PHARMACOLOGY section in full prescribing information).

The patient dose should be measured by a suitable radioactivity calibration system immediately prior to patient administration. Radiochemical purity should be checked prior to patient administration.

Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration whenever solution and container permit.

Store at room temperature (15 to 30°) before and after reconstitution.

RADIATION DOSIMETRY: Table 4 shows the radiation doses to organs and tissues of an average patient (70 kg) per 1110 MBq (30 mCi) of Technetium Tc99m Sestamibi injected intravenously.

Table 4. Radiation Absorbed Doses from Tc99m Sestamibi

	Estimated Radiation Absorbed Dose			
	REST			
	2.0 hour void		4.8 hour void	
Organ	rads/ 30 mCi	mGy/ 1110 MBq	rads/ 30 mCi	mGy/ 1110 MBq
Breasts	0.2	2.0	0.2	1.9
Gallbladder Wall	2.0	20.0	2.0	20.0
Small Intestine	3.0	30.0	3.0	30.0
Upper Large Intestine Wall	5.4	55.5	5.4	55.5
Lower Large Intestine Wall	3.9	40.0	4.2	41.1
Stomach Wall	0.6	6.1	0.6	5.8
Heart Wall	0.5	5.1	0.5	4.9
Kidneys	2.0	20.0	2.0	20.0
Liver	0.6	5.8	0.6	5.7
Lungs	0.3	2.8	0.3	2.7
Bone Surfaces	0.7	6.8	0.7	6.4
Thyroid	0.7	7.0	0.7	6.8
Ovaries	1.5	15.5	1.6	15.5
Testes	0.3	3.4	0.4	3.9
Red Marrow	0.5	5.1	0.5	5.0
Urinary Bladder Wall	2.0	20.0	4.2	41.1
Total Body	0.5	4.8	0.5	4.8

Stabin, M., July, 1990, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831, (615) 576-3449.

HOW SUPPLIED: Du Pont's CARDIOLITE®, Kit for the preparation of Technetium Tc99m Sestamibi is supplied as a 5 mL vial in kits of two (2), five (5) and thirty (30) vials, sterile and non-pyrogenic.

Prior to lyophilization the pH is between 5.3 and 5.9. The contents of the vials are lyophilized and stored under nitrogen. Store at room temperature (15 to 30°C) before and after reconstitution. Technetium Tc99m Sestamibi contains no preservatives. Included in each two (2) vial kit is one (1) package insert, five (5) vial shield labels and five (5) radiation warning labels. Included in each five (5) vial kit is one (1) package insert, five (5) vial shield labels and five (5) radiation warning labels. Included in each thirty (30) vial kit is one (1) package insert, thirty (30) vial shield labels and thirty (30) radiation warning labels.

The US Nuclear Regulatory Commission has approved this reagent kit for distribution to persons licensed to use byproduct material identified in 35.100 and 35.200 of 10 CFR Part 35, to persons who hold an equivalent license issued by an Agreement State, and, outside the United States, to persons authorized by the appropriate authority.

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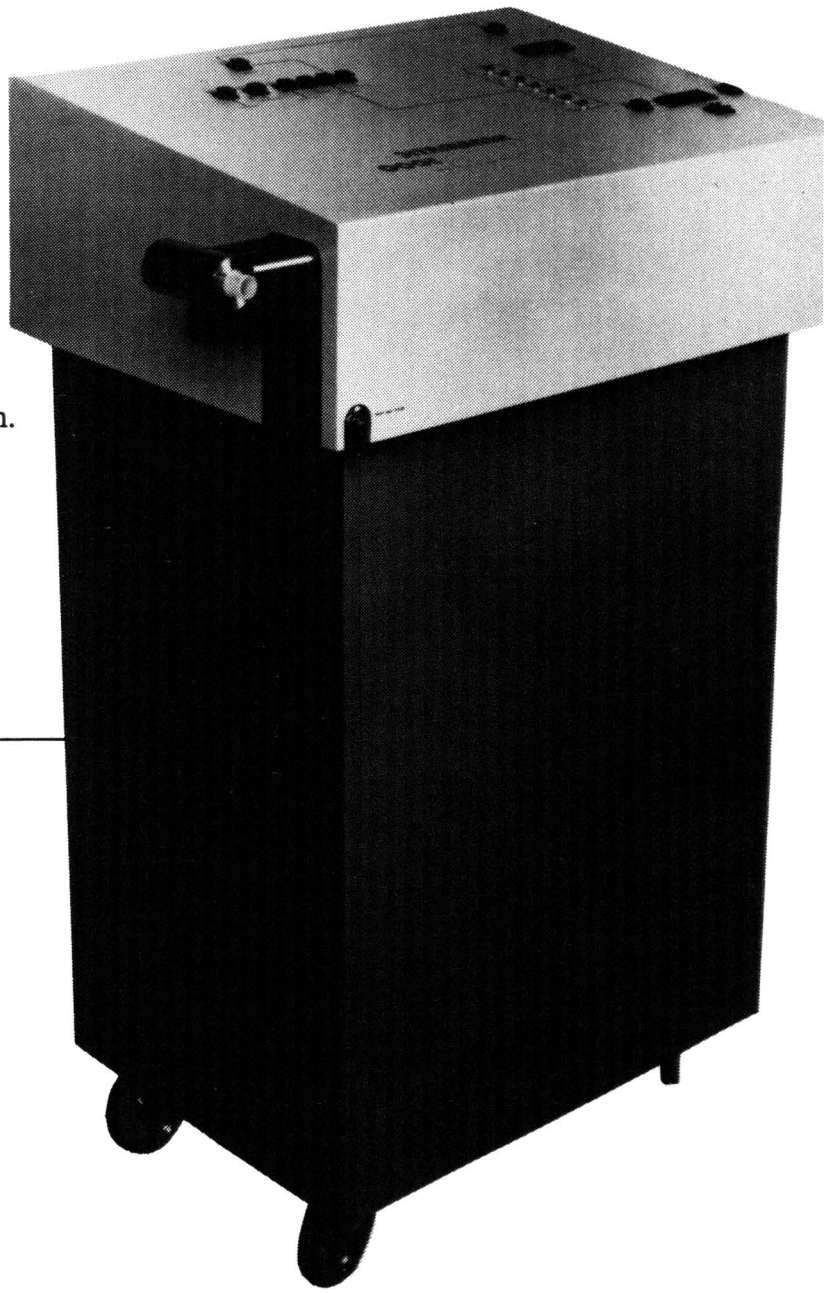

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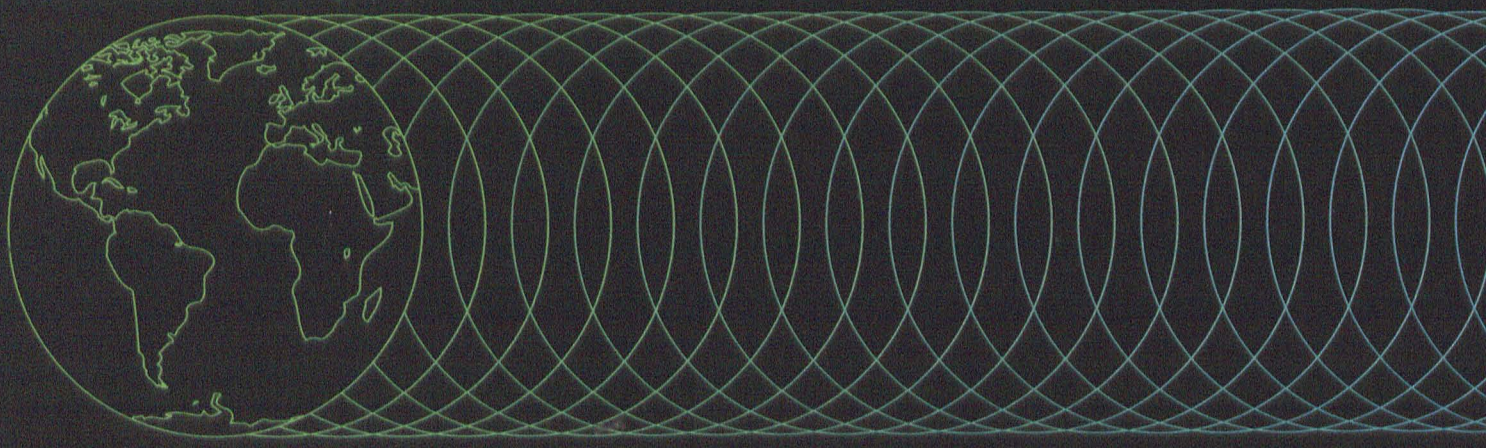
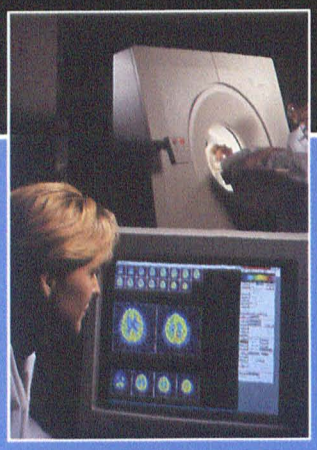


You Need to Keep Informed of the Rapidly Changing Practice of Clinical PET!



You may already be a member of another medical society, but ICP is the only professional group dedicated to PET.

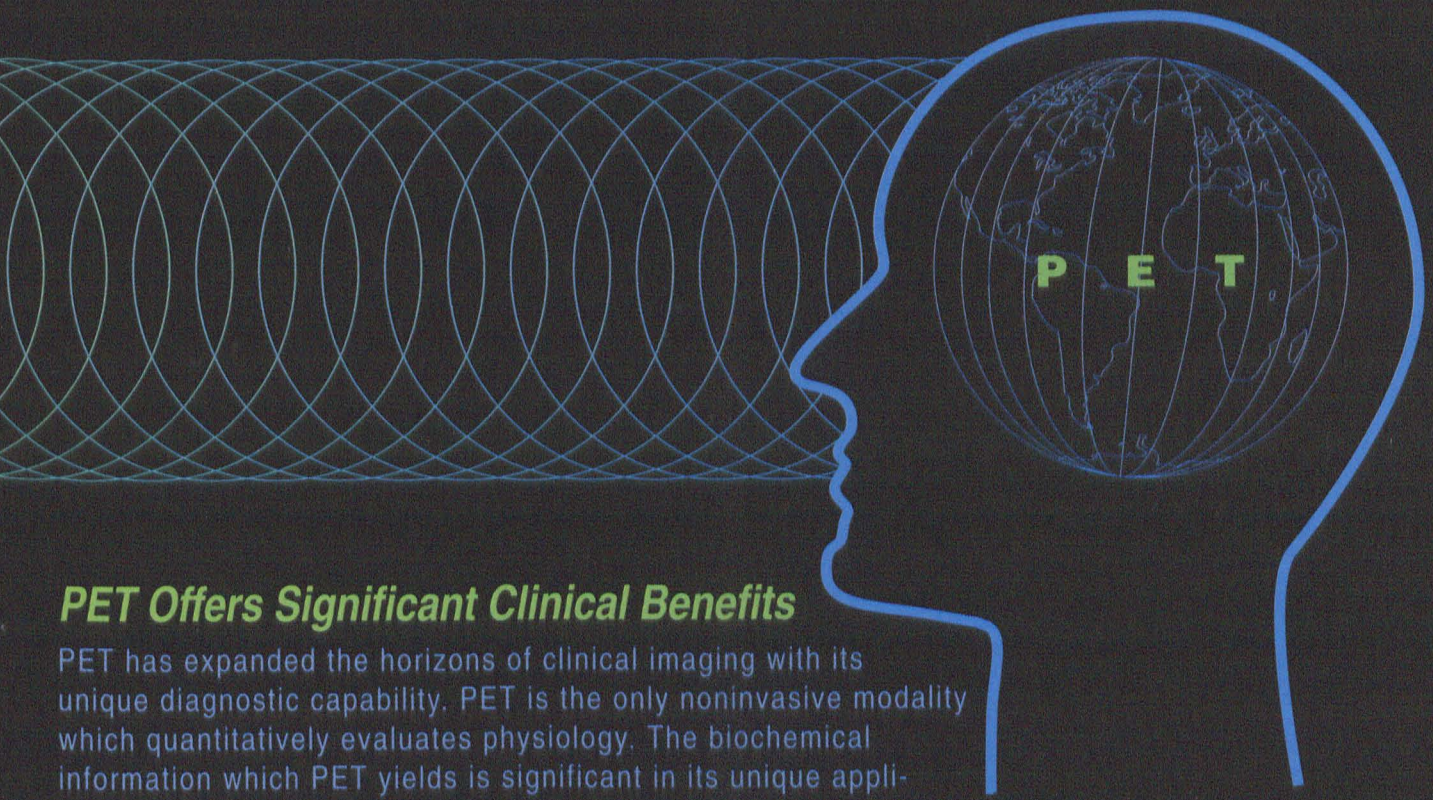
The Institute for Clinical PET (ICP) was formed by nuclear medicine physicians, cardiologists, neurologists and radiologists. It is the only non-profit worldwide educational foundation comprised of the leading multi-disciplinary medical imaging physicians, scientists, administrators and technologists representing PET centers and facilities around the world.

ICP provides individual, institutional and industry members with:

- Economic & utilization impact studies
- Conference abstracts and proceedings
- A newsletter with the latest worldwide developments in PET regulatory and scientific areas
- Input and participation in the formulation of FDA and other regulatory agency policies
- Involvement with DOE/PET research programs
- Annual international conference
- The latest updates in clinical PET research
- Regional seminars
- Educational programs

ICP

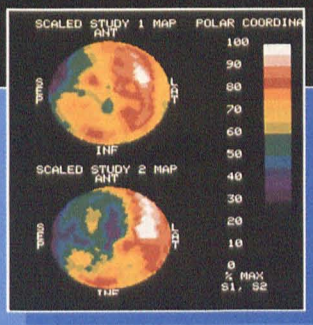
Institute for Clinical PET
2105 National Press Building,
Washington DC 20045
(202) 466-4274
Fax: (202) 659-2897



PET Offers Significant Clinical Benefits

PET has expanded the horizons of clinical imaging with its unique diagnostic capability. PET is the only noninvasive modality which quantitatively evaluates physiology. The biochemical information which PET yields is significant in its unique applications and cannot be obtained by any other method. PET offers many significant clinical benefits in diagnosis and management of Cardiac, Neurologic or Oncologic disease.

Cardiology



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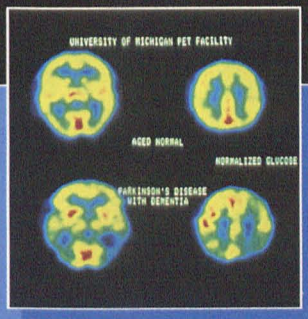
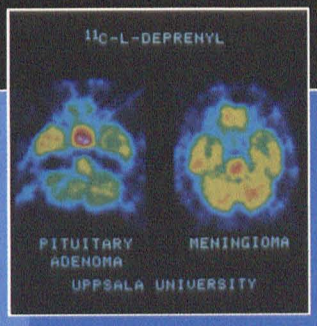


Oncology



Join The Institute for Clinical PET

Yes, I'm interested in membership with the Institute for Clinical PET (ICP). Please send more information.

Name _____ Degree(s) _____

Title _____

Hospital/Clinic/Company _____

Address _____ City _____ State _____ Zip _____

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Phone _____ Fax _____

Mail or Fax this completed form to:

The Institute for Clinical PET; 2105 National Press Building, Washington DC 20045 (202) 466-4274; Fax: (202) 659-2897

CALL FOR

ABSTRACTS

FOR

Scientific Papers and Scientific Exhibits

1992 Scientific Program Committee, Scientific Exhibits Subcommittee, and the Scientific & Teaching Sessions Committee solicit the submission of abstracts from members and nonmembers of The Society of Nuclear Medicine for the 39th Annual Meeting in Los Angeles, CA. Scientific Paper abstracts accepted for the program will be published in a special supplement to the May issue of *The Journal of Nuclear Medicine* and accepted Technologist Section abstracts will be published in the June issue of the *Journal of Nuclear Medicine Technology*. Abstracts accepted for Society Program Scientific Exhibits will not be published. Original contributions on a variety of topics related to nuclear medicine will be considered, including:

The Society of Nuclear Medicine
ANNUAL MEETING
Tuesday-Friday
June 9-12, 1992
Los Angeles, CA

- **Instrumentation and Data Analysis**
- **Radioassay**
- **Radiopharmaceutical Chemistry**
- **Dosimetry/Radiobiology**
- **Nuclear Magnetic Resonance**
- **Clinical Science Applications**
- **Bone/Joint**
- **Cardiovascular (clinical and basic)**
- **Endocrine**
- **Gastroenterology**
- **Neurology (clinical and basic)**
- **Immunology (antibody)**
- **Pediatrics**
- **Pulmonary**
- **Renal/Electrolyte/ Hypertension**
- **Hematology/ Infectious Disease**
- **Oncology (non-antibody)**

Authors seeking publication for the full text of their papers are strongly encouraged to submit their work for immediate review to the *JNM*, and for the technologist section, to the *JNMT*.

DEADLINES

For receipt of abstracts for SCIENTIFIC PAPERS is Tuesday, January 7, 1992.

For receipt of abstracts for SCIENTIFIC EXHIBITS is Tuesday, January 14, 1992.

There are two abstract forms for this year's meeting. The Scientific Paper abstract form can be obtained in the October 1991 *JNM*. The Scientific Exhibits abstract form is only available by calling or writing:

The Society of Nuclear Medicine
136 Madison Avenue,
Tel: (212) 889-0717

Att: Abstracts
New York, NY 10016-6760
FAX: (212) 545-0221 1S

THE SOCIETY OF NUCLEAR MEDICINE

MID-WINTER MEETING

Title: Computer and Instrumentation: Toward the 21st Century
Location: Hyatt Regency DFW, Dallas, TX
Date: Monday-Tuesday, February 10-11, 1992
Sponsor: The Computer and Instrumentation Council of The Society of Nuclear Medicine
CME Credit: Approximately 12 Hours AMA Category I
VOICE Credit: Approximately .9 CEUs available for VOICE Credit for Technologists
Seminar Notes: Registration includes a luncheon on Monday, February 10th, with a guest speaker. There are a limited amount of lunches available so please register early.

THE FEE	Before 12/20	On/After 12/20
Physicians/Scientists		
Members	$175.00	$220.00
Nonmembers	205.00	250.00
Technologists		
Members	80.00	110.00
Nonmembers	110.00	140.00
Students	70.00	70.00

ALL PRE-REGISTRATIONS MUST BE RECEIVED BY JANUARY 17, 1992

COMPUTER AND INSTRUMENTATION: TOWARD THE 21st CENTURY

Hyatt Regency DFW, Dallas, TX • Monday, February 10 — Tuesday, February 11, 1992

PLEASE ENROLL THE FOLLOWING (use copies for additional registrants):

Name (as it should appear on badge)

Affiliation

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City State Zip

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MAIL TO:
THE SOCIETY OF NUCLEAR MEDICINE
COMPUTER and INSTRUMENTATION SYMPOSIUM
Department of Meeting Services
136 Madison Avenue
New York, NY 10016-6760 • (212) 889-0717

To make hotel reservations, call the Hyatt Regency DFW direct at (214) 453-1234. Indicate you are with The Society of Nuclear Medicine. Please make your reservations by January 10, 1992. Do NOT mail housing informaton to The Society.

Did You Receive

the **Abstract Form** in the **October *JNM*?**

In November the **Registration Form** was mailed with your **November *JNM***

AND

In December the **Housing Form** was included with your **December *JNM***

If you have missed any of these forms, or require additional forms, please contact us at the phone number, fax number and/or address given below.

Call or write

The Society of Nuclear Medicine
136 Madison Avenue
New York, NY 10016
(212) 889-0717
Fax: (212) 545-0221
Attn: Meeting Services Dept.

SNM 39 SNM

SNM 39th ANNUAL MEETING

CRITICAL DATES

Item	Form Included in *JNM*	Due Date
ABSTRACT FORM Scientific Papers	October Issue	1/07/92
Scientific Exhibits	Contact SNM, Attn: Meetings Department	1/14/92
REGISTRATION FORM	November Issue	5/08/92
HOUSING FORM	December Issue	5/15/92

DON'T FORGET THE MID-WINTER MEETING IN DALLAS, TEXAS

DATE:
February 10–11, 1992

LOCATION:
Hyatt Regency DFW, Dallas, TX

SPONSOR:
The Computer and Instrumentation Council

The Journal of Nuclear Medicine 1992 Reader Survey

You are invited to help shape the editorial policies of *The Journal of Nuclear Medicine.* Please fill out the questionnaire and drop it in the mail. Our primary objective has always been to serve the needs of the nuclear medicine community–but unfortunately, the day-to-day operation of a biomedical journal often leaves little time for looking ahead, and no time for looking around. You can give that important perspective. Give us a piece of your mind, and we'll give you a better Journal.

INSTRUCTIONS: The questions below may be answered by selecting letter codes from the selections beneath each question. Additional comments on separate sheets may be stapled to the form, but may require that additional postage be affixed. The *Journal* welcomes personal correspondence on any subject from readers and may be reached by phone at (617) 726-5785, or by fax at (617) 726-5708. Queries regarding subscription problems, government relations or matters not directly related to the basic editorial functions of the *Journal,* should be directed to the Society of Nuclear Medicine's offices in New York: (212) 889-0717.

1. How many hours **per month** do you spend reading the Journal?
   A. <1 **B.** 1–2 **C.** 2–3 **D.** >3

2. If the full text of *JNM* articles were available on-line, you would _____.
   - **A. Utilize the service at least once a week**
   - **B. Utilize the service at least once a month**
   - **C. Utilize less than once a month**
   - **D. Have no interest in this service**

3. You are interested mainly in studies concerning: (choose 3, and number them in order of importance to you)
   - **A. Cardiology** ___
   - **B. Brain** ___
   - **C. Oncology** ___
   - **D. Respiratory** ___
   - **E. Hepatobiliary** ___
   - **F. Genitourinary** ___
   - **G. Endocrine** ___
   - **H. Gastroenterology** ___
   - **I. Skeletal** ___
   - **J. Antibodies** ___
   - **K. Instrumentation** ___
   - **L. Radiochemistry** ___
   - **M. Other** ___

4. You would classify yourself as a(n) _____.
   - **A. Clinician**
   - **B. Technologist**
   - **C. Researcher**
   - **D. Industrial Representative**
   - **E. Regulator**
   - **F. Student**

5. Which nuclear medicine procedures are performed most often in your department? (Again, please list your top three).
   1._____ 2._____ 3._____

6. You would like to see a greater number of _____ in the *Journal.*
   - **A. Case Reports**
   - **B. Basic Science Studies**
   - **C. Human Studies**
   - **D. Methodological Evaluations**
   - **E. Other** _____

7. You would like to see a continuing medical education article on _____.

8. Your institution is located in _____.
   - **A. The United States or Canada**
   - **B. Europe**
   - **C. The Pacific Rim**
   - **D. India/Asia**
   - **E. Central/South America**
   - **F. Africa/Middle East**

9. Rate the following *Journal* elements, from 1 to 10, for their value to you. 1 representing little or no value, 10 representing an element that you specifically look for each time you read the *Journal.*
   - **Randoms** ___
   - **First Impressions** ___
   - **Annotations** ___
   - **Newsline** ___
   - **Human Studies** ___
   - **Laboratory studies** ___
   - **Methodology papers** ___
   - **Case Reports** ___
   - **Clinicopathologic Conferences** ___
   - **Continuing Medical Education** ___
   - **Editorial Commentary** ___
   - **Letters to the Editor** ___
   - **Calendar** ___
   - **New Products** ___
   - **Book Reviews** ___

10. Considering your use of the *Journal,* your membership benefit of a subscription to *The Journal of Nuclear Medicine* is _____.
    - **A. a good value**
    - **B. in line with outher journals**
    - **C. high, compared to other journals**
    - **D. a poor value**

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JNM

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H. WILLIAM STRAUSS, EDITOR IN CHIEF

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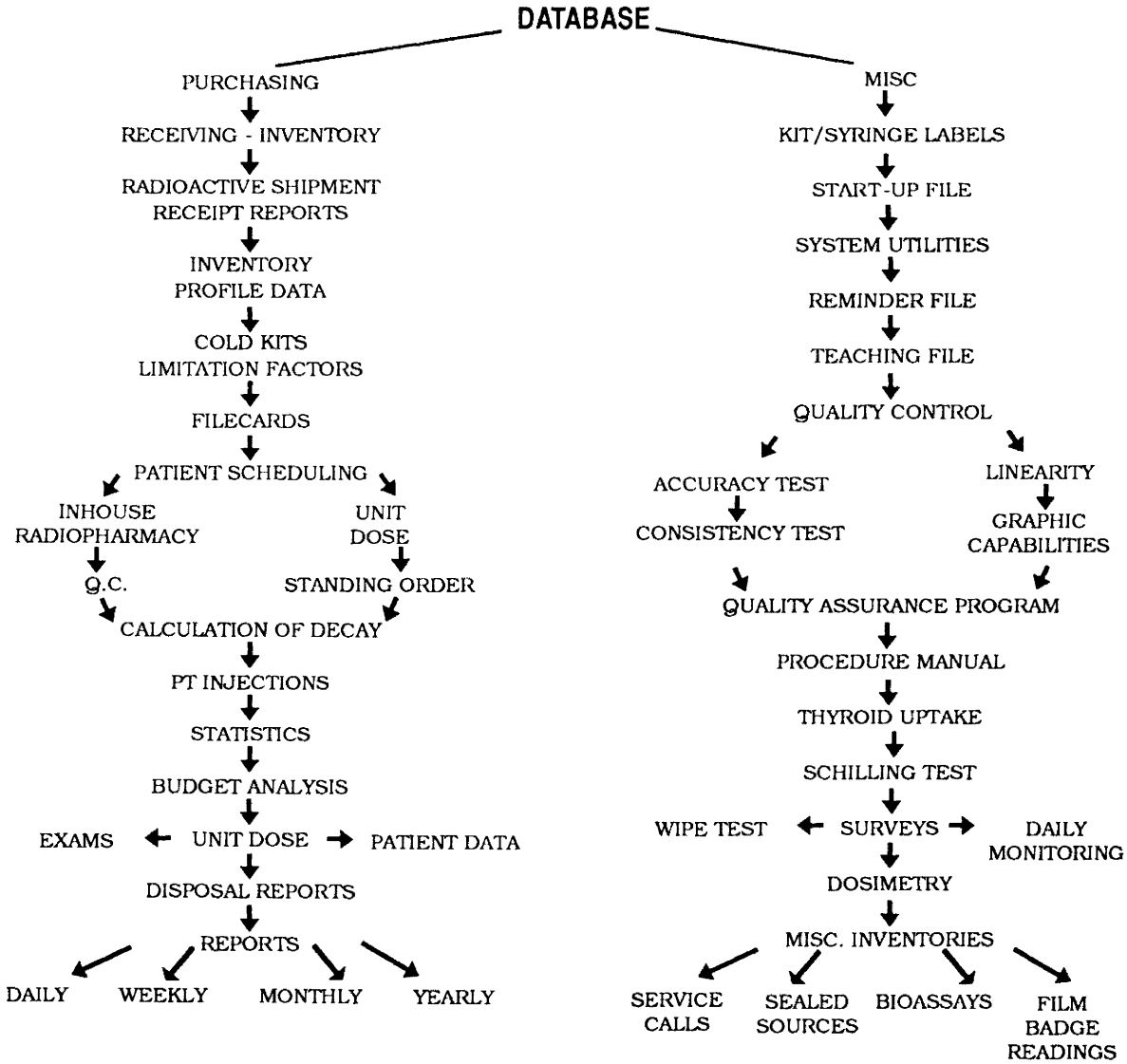

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The Society of Nuclear Medicine Education and Research Foundation 1991 Grants and Awards

TETALMAN AWARD

Kimberlee J. Kearfoot, PhD, Georgia Institute of Technology and Emory University in Atlanta, GA

PILOT RESEARCH AWARD

Howard J. Eisen, MD, University of Pennsylvania, Philadelphia, PA
"Noninvasive Detection of Myocarditis Using Monoclonal Antibodies"

PAUL COLE SCHOLARSHIPS

NAME	INSTITUTION	DIRECTOR
Susana Bienkowski	Michener Institute, Toronto, Ontario	Mrs. Martha Bennett
Heidi Bougie	St. Mary's Hospital, Milwaukee, WI	Ms Julia Ross
Cheryl Durling	Indiana University, Indianapolis, IN	Dr. Henry Wellman
Iris Guadagno	Hillsborough Community College, Tampa, FL	Mr. Max H. Lombardi
Christina Healthcote	Gloucester Community College, Sewell, NJ	Ms. Luncy E. Stetter
Marilyn Torrence	VA Medical Center, John Cochran Division, St. Louis, MO	Ms Sheila Rosenfeld

STUDENT FELLOWSHIPS

NAME	INSTITUTION	DIRECTOR
Brian P. Brooks	University of Pennsylvania, School of Medicine, Philadelphia, PA	Dr. Abass Alavi
Howard J. Eisen	University of Michigan Hospitals, Ann Arbor, MI	Dr. Mark A. Mintun
Tomasz D. Gutowski	University of Michigan, Medical Center, Ypsilante, MI	Dr. Richard L. Wahl
James B. Jones	Hospital of the University of Pennsylvania, Philadelphia, PA	Dr. Howard J. Eisen
Teresa M. Jones-Wilson	Mallinckrodt Institute of Radiology, St. Louis, MO	Dr. Michael J. Welch
Mangesh H. Kanvinde	University of Oklahoma HSC, Oklahoma City, OK	Dr. Garo P. Basmadjian
Lori Jo Kiewel	University of New Mexico, Albuquerque, NM	Dr. Dennis Eschimo
Judeth K. McGann	Stanford University, Palo Alto, CA	Dr. Michael Goris
Shawn T. Patrick	Veteran's Administration Medical Center, Portland, OR	Dr. Jerry Glowniak
Erik R. Rios	Memorial Sloan-Kettering Cancer Center, New York, NY	Dr. Steve M. Lawson
Diana J. Tribbey	Perdue University/Washington University, W. Lafayette, IN	Dr. Mark A. Green

Policy — *The Journal of Nuclear Medicine* accepts classified advertisements from medical institutions, groups, suppliers, and qualified specialists in nuclear medicine. Acceptance is limited to Positions Open, Positions Wanted, and Equipment. We reserve the right to decline, withdraw, or modify advertisements.

Rates for Classified Listings — $19.00 per line or fraction of line (approx. 50 characters per line, including spaces). Please allow 28 characters for the first line which will appear in capital letters. Special rates for *SNM members* on Positions Wanted: $10.00 per line. *Note: Box numbers are available for the cost of the 2 lines required.*

Rates for Display Ads — Agency commissions are offered on display ads only.

Full page	$1400	Quarter page	$550
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Publisher-Set Charges — Page $100; half page $75; quarter page $40; eighth page $25.

Terms — Payment must accompany order. Make checks payable, in U.S. dollars on U.S. banks only, to: The Society of Nuclear Medicine.

Deadline — First of the month preceding the publication date (January 1 for February issue). Please submit classified listings typed double spaced. No telephone orders are accepted.

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(212) 889-0717
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Positions Available

Fellowship

PEDIATRIC NUCLEAR MEDICINE FELLOWSHIP position in a 270-bed preeminent pediatric center. 2,800 imaging procedures per year encompassing all aspects of nuclear medicine with emphasis on teaching and research. Staff includes three full-time ABNM, ABR certified practitioners. Four state-of-the-art Gamma cameras and image processing and display system with networking. Salary 30-45K per annum. ABNM/ABR eligibility or certification required. Contact: James J. Conway, MD, The Children's Memorial Hospital, 2300 Children's Plaza, Chicago, IL 60614. (312) 880-4416.

Physician

Oregon Health Sciences University, Portland, Oregon invites applications for a FACULTY POSITION available immediately either part time in NUCLEAR MEDICINE or full time divided between nuclear medicine and another division of diagnostic radiology. Position requires that radiologist be certified by either American Board of Radiology (Special Competence in Nuclear Radiology) and/or American Board of Nuclear Medicine. Send CV and references to William Weidner, MD, Chairman, Diagnostic Radiology, UHN-72, Oregon Health Sciences University, Portland, OR 97201-3098. OHSU is an affirmative action equal opportunity employer.

NUCLEAR RADIOLOGY DIVISIONAL CHIEF, Pittsburgh, PA. 14-member private practice group in 523-bed teaching hospital seeks ABNM/nuclear medicine special competence board certified radiologist to head division of nuclear medicine. Department performs 156,000 studies annually, including 6,575 nuclear medicine studies with strong emphasis on cardiac imaging. Requirements include 5 years of nuclear medicine imaging, including cardiovascular and SPECT, strong teaching interest, and administrative experience. Duties would include some other areas of diagnostic radiology. Competitive salaries and excellent benefits for this partnership-track position. Send CV to: Diagnostic Imaging Associates, 2041 Blvd. of the Allies, Pittsburgh, PA 15219, Attn: B.A. Carlin, MD.

NUCLEAR RADIOLOGIST—Immediate opening for Director of Nuclear Medicine in large private hospital in Charlotte, NC. 12-person subspecialty-oriented radiology group seeks fellowship-trained ABR & ABNM certified colleague to practice nuclear medicine and some general radiology. Reply to Henry T. Adkins, P.O. Box 221249, Charlotte, NC 28222.

The University of Pittsburgh Heart Institute and the Division of Cardiology of the University of Pittsburgh School of Medicine seek to recruit a BC/BE cardiologist to direct a CARDIAC PET IMAGING program. Outstanding facility with exceptional support staff and resources available. Candidates must have substantial experience in positron imaging with demonstrated academic commitment. Attractive salary and benefits, including participation in departmental practice plan. Qualified applicants should submit curriculum vitae to William P. Follansbee, MD, 376 Scaife Hall, 3550 Terrace Street, Pittsburgh, PA 15261. The University of Pittsburgh is an equal opportunity employer.

The University of Pittsburgh Heart Institute and the Division of Cardiology of the University of Pittsburgh School of Medicine seek to recruit a BC/BE cardiologist in NUCLEAR CARDIOLOGY. Exceptional clinical facilities support existing high-volume laboratories. Excellent support resources available, including very productive collaborations with the department of nuclear medicine. Candidates must be experienced in nuclear cardiology and have demonstrated academic commitment. Qualified applicants should submit curriculum vitae to William P. Follansbee, MD, 376 Scaife Hall, 3550 Terrace Street, Pittsburgh, PA 15261. The University of Pittsburgh is an equal opportunity employer.

Physicist

DIRECTOR OF NUCLEAR MEDICINE PHYSICS AND INSTRUMENTATION. A highly qualified PhD physicist to lead an active research group on PET and SPECT instrumentation with an interest in research applications in neurology, psychiatry, cardiology, and oncology. The successful candidate must qualify for a faculty appointment as associate professor with tenure at the University of Pennsylvania School of Medicine. Please send Curriculum Vitae to: Abass Alavi, MD, Chief, Division of Nuclear Medicine, Dept. of Radiology, Hospital of the University of Pennsylvania, 3400 Spruce St., Philadelphia, PA 19104. The University of Pennsylvania is an affirmative action/equal opportunity employer.

Researcher

The University of Michigan Medical School seeks a RESEARCH INVESTIGATOR OR ASSISTANT RESEARCH SCIENTIST in the Division of Nuclear Medicine. This faculty member will join a large multidisciplinary research group involved in the development and clinical applications of new radiopharmaceuticals for PET. The successful applicant will be expected to join current research efforts as well as develop his/her own research program in radiopharmaceutical chemistry, and to participate in education of undergraduate, graduate, and postgraduate students. Qualifications include a PhD in chemistry or medicinal chemistry; experience in radiochemistry helpful but not required. Please send curriculum vitae to Dr. Michael R. Kilbourn, Division of Nuclear Medicine, B1G412 University Hospital, University of Michigan, Ann Arbor, MI 48109-0028. Affirmative action/equal opportunity employer.

POSTDOCTORAL POSITIONS: Positions available in the expanding, exciting field of new radiotracer development for Positron Emission Tomography (PET). Candidates will join chemists, physicians, physicists and others in multidisciplinary research effort in the in vivo imaging of human biochemistry. PhD in organic or medicinal chemistry; experience in radiochemistry desirable but not necessary. Please send CV to Dr. Michael R. Kilbourn, Division of Nuclear Medicine, B1G412 University Hospital, University of Michigan, Ann Arbor, MI 48109-0028. Affirmative action/equal opportunity employer.

Residency

ABNM-approved NUCLEAR MEDICINE RESIDENCY position (2) at the University of Missouri Hospital and Harry S. Truman Memorial Veterans Hospital in Columbia, Missouri, beginning July 1, 1992. Clinical experience includes state-of-the-art imaging and radioassay studies. Participation in clinical or basic research is encouraged. Candidate should preferably have completed two years of ACGME-approved residency. For further information contact: Amolak Singh, MD, Acting Chief of Nuclear Medicine, One Hospital Drive, Columbia, MO 65212. Phone (314) 882-7955.

University of Tennessee Medical Center at Knoxville—NUCLEAR MEDICINE RESIDENCY program, July 1, 1992. The University of Tennessee Medical Center, Knoxville, Tennessee is offering two positions in a 2-year ACGME-approved program designed to provide competency in all aspects of nuclear medicine to meet the requirement of the American Board of Nuclear Medicine. UTMCK is a 600-bed hospital and the regional referral center for east Tennessee. The Section of Nuclear Medicine is part of the Department of Radiology, a comprehensive diagnostic imaging center with X-ray radiography, CT, MRI, and clinical PET. The Nuclear Medicine Section performs 6,000 conventional imaging procedures, 21,000 RIAs and more than 1,000 clinical PET studies per year. The program includes extensive training in conventional procedures, nuclear cardiology, SPECT imaging, PET, and therapy with radionuclides. The Nuclear Medicine Section is equipped with an up-to-date image processing laboratory and the entire department is interconnected through an ethernet communications system. Special research opportunities are being offered in cardiology, oncology, and neurology. Applicants should have 2 years of ACGME-approved training in internal medicine, pediatrics, pathology, or radiology. Send applications and CV to: Karl F. Hubner, MD, Chief, Nuclear Medicine, UTMCK, 1924 Alcoa Highway, Knoxville, TN 37920. UTMCK is an EEO/AA/Title IX/Section 504/ADA Employer.

Technologist

TECHNOLOGIST-NUCLEAR MEDICINE wanted for a private outpatient imaging center in Tampa, Florida. Experienced in cardiac & bone imaging using SPECT. Top salary, bonus, benefits. Contact: Terri Sternad, North Tampa Imaging Center, 4019 W. Waters Ave., Tampa, FL 33614. Phone (813) 888-7065. Fax (813) 889-8224.

Position Wanted

ABNM-certified MD seeks new full-time position. Extensive and varied NUCLEAR MEDICINE experience includes SPECT and features thyroid. Reply to: Box 202, The Society of Nuclear Medicine, 136 Madison Ave., New York, NY 10016-6760.

Equipment

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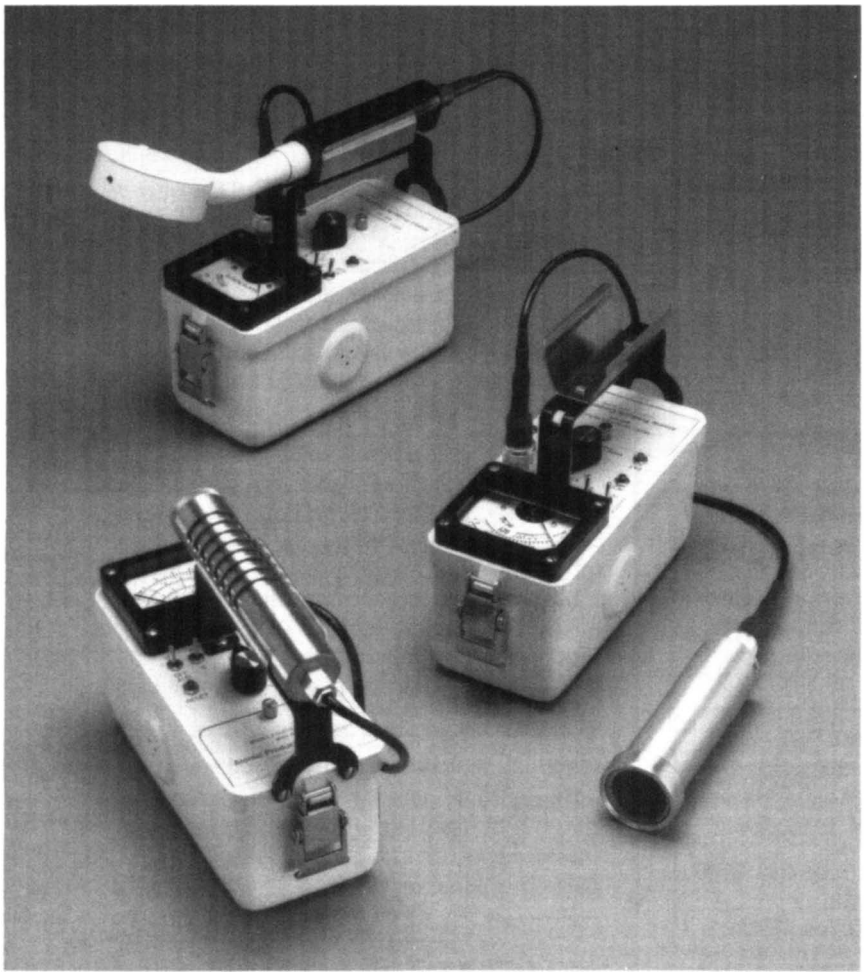
Each description of the products below was condensed from information supplied by the manufacturer. The reviews are published as a service to the professionals working in the field of nuclear medicine and their inclusion herein does not in any way imply an endorsement by the Editorial Board of The Journal of Nuclear Medicine *or by The Society of Nuclear Medicine.*

Survey Instruments



Atomic Products Corporation introduces a complete line of survey instruments including radiation meters, monitors, and probes. A key feature of the new RAM Survey Meter is its ability to interchange detectors without the need for recalibration. This saves valuable time while simultaneously ensuring accurate readings. The Model 2 Beta/Gamma Survey Meter comes complete with a built-in Side Wall GM Detector and telescoping metal holder. Stray radiation is indicated by a built-in speaker and is ideal for measuring iodine-131, phosphorous-32, or higher energy beta radiation. The RAM Gamma Survey Meter is designed for one hand operation, utilizes only three pushbuttons, and provides fast time response and dead time correction. **Atomic Products Corporation, P.O. Box 702, Shirley, NY 11967. (516) 924-9000.**

Please see page 44A

High Resolution Graphics Board

XLI Corporation announces the availability of LaserPix 3.0 high-resolution graphics printer controller board. The unit, which utilizes SUPER LGA Technology, offers true halftone print capability. Benchmark tests suggest that a test image can be produced in less than 30 seconds using SUPER LGA technology. A full-page picture uses only half a megabyte of memory, compared with as much as 8 megabytes required by a dithered image. LaserPix upgrades standard 300 dpi laser printers to 2400 dpie (dots per inch equivalent) for photographic output. The product consists of two boards: the controller board is placed in the PC and the laser interface board resides in the printer. SUPER LGA technology allows the printer to vary the size of the individual dots that make up an image. Micrografx Picture Publisher is supplied free with LaserPix, providing image improvement tools such as grayscale adjustment, cropping, sizing, and scaling. Once the picture is edited, LaserPix is used to print the image. Images are produced with 256 gray levels at either 75- or 150-line screen, providing 2400 dpie. LaserPix is available immediately for all PC and compatible computers (Intel 80286 and higher) and industry standard laser pri nters with available video port. Print drivers are available for many popular Windows 3.0 applications including Aldus Pagemaker 4.0 and Ventura Publisher Windows edition and LaserPix supports PCL and Postscript printers. **XLI Corporation, 200 West Cummings Park, Suite 24, Woburn, MA 01801. (617) 932-9199 or (800) 338-0506.**

Please see page 44A

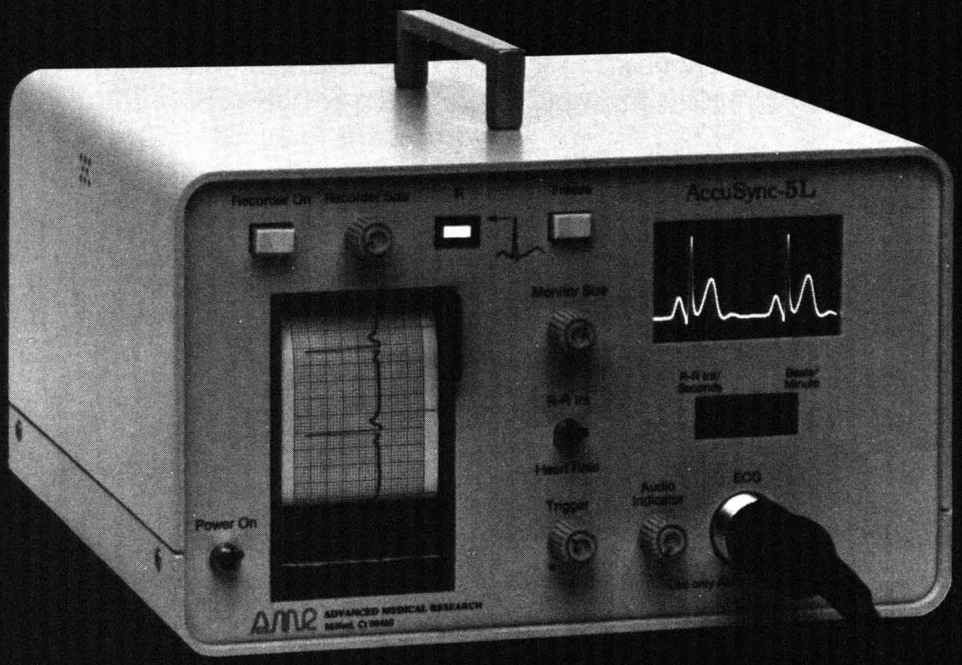
PLC Line Conditioner

Best Power Technology, Inc. introduces PLC Line Conditioners featuring surge suppression, true isolation, full voltage regulation, and harmonics suppression. PLC protects PCs, workstations, LAN nodes, and computer peripherals. For surge suppression capability, PLC can reduce a 250 volt surge to one volt. Bother large and small surges never reach the load. PLC completely isolates its load from incoming utility power. An output neutral-to-ground bond eliminates the possibility of high-frequency line noise damaging the system. This design gives sensitive office equipment the best operating environment. PLC protects against many high and low-line voltage conditions. Only clean, regulated power reaches the load, even if the line is full of surges or sags. PLC also smooths out harmonic distortions. The unit's ferroresonant technology removes power line harmonics and gives a pure sine-wave output to the load to help protect equipment. A softwire PLC is available in sizes from 110 VA through 1.8 KVA. The hardwire option fits needs between 2,000 and 15,000 watts. **Kenneth Urban, Best Power Technology, Inc., P.O. Box 280, Necedah, WI 54646. (608) 565-7200 or (800) 356-5794.**

Please see page 44A

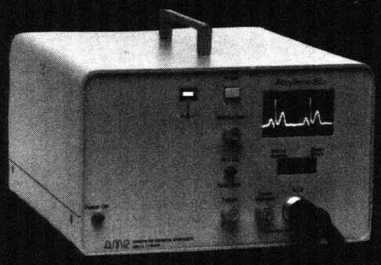
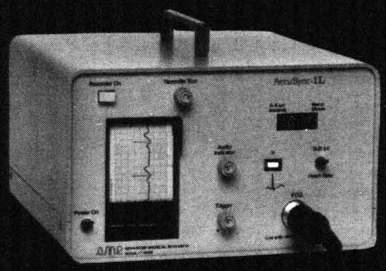
AMR's AccuSync provides R-wave detection with precision and reliability.

The finest R-wave Triggering device available for computerized gated cardiac studies.



AccuSync-5L Features

- Isolation Amplifier for Patient Safety
- Digital CRT Monitor
- ECG Strip Chart Recorder
- Heart Rate/R-R interval
- Trigger Pulse LED
- Trigger Control for Ease of Lead Placement and Precise Location of Trigger Pulse
- R-Trigger Output, Compatible with all Computers
- No Delay
- ECG Output
- Playback Mode (optional)
- Event Marker (optional)
- Audio Indicator

MODEL		FEATURES
AccuSync-6L		All **AccuSync-5L** features with the exception of the Strip Chart Recorder.
AccuSync-1L		All **AccuSync-5L** features with the exception of the Digital CRT Monitor.
AccuSync-3R		All **AccuSync-1L** features with the exception of the Strip Chart Recorder and Playback Mode.
AccuSync-4R		All **AccuSync-3R** features with the exception of the Heart Rate/R-R interval display.

ADVANCED MEDICAL RESEARCH CORP

148 Research Drive/P.O. Box 3094
Milford, CT 06460/Telephone: (203) 877-1610
Fax: (203) 877-8972

JNM
DIRECT RESPONSE

The *Journal* is testing a new method to enable you to get information on a more timely basis from our advertisers.

Listed below are the companies that have advertised in this issue, as well as those that have been mentioned in the *New Products* section. Simply fill out the form and FAX it to the Society (FAX: 212/545-0221), and we will send it to the advertiser.

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CardioGen-82*
Rubidium Rb 82 Generator

INDICATIONS AND USAGE

Rubidium chloride Rb 82 injection is a myocardial perfusion agent that is useful in distinguishing normal from abnormal myocardium in patients with suspected myocardial infarction.

Cardiogen-82 (Rubidium Rb 82 Generator) must be used with an infusion system specifically labeled for use with the generator and capable of accurate measurement and delivery of doses of rubidium chloride Rb 82 injection not to exceed a single dose of 2220 MBq (60 mCi) and a cumulative dose of 4440 MBq (120 mCi) at a rate of 50 mL/min with a maximum volume per infusion of 100 mL and a cumulative volume not to exceed 200 mL. These performance characteristics reflect the conditions of use under which the drug development clinical trials were conducted.

Adequate data from clinical trials to determine precise localization of myocardial infarction or identification of stress-induced ischemia have not been collected.

Positron emission tomographic (PET) instrumentation is recommended for use with rubidium chloride Rb 82 injection.

CONTRAINDICATIONS

None known.

WARNINGS

Caution should be used during infusion as patients with congestive heart failure may experience a transitory increase in circulatory volume load. These patients should be observed for several hours following the Rb-82 procedure to detect delayed hemodynamic disturbances.

PRECAUTIONS

General

Data are not available concerning the effect of marked alterations in blood glucose, insulin, or pH (such as is found in diabetes mellitus) on the quality of rubidium chloride Rb 82 scans. Attention is directed to the fact that rubidium is physiologically similar to potassium, and since the transport of potassium is affected by these factors, the possibility exists that rubidium may likewise be affected.

Rubidium chloride Rb 82 injection must be administered only with an appropriate infusion system capable of meeting the performance characteristics previously described. (See **INDICATIONS AND USAGE**). The drug should be used only by those practitioners with a thorough understanding of the use and performance of the infusion system.

Repeat doses of rubidium chloride Rb 82 injection may lead to an accumulation of the longer lived radioactive contaminants strontium Sr 82 and strontium Sr 85.

Since eluate obtained from the generator is intended for intravenous administration, aseptic techniques must be strictly observed in all handling. Only additive free Sodium Chloride Injection USP should be used to elute the generator. Do not administer eluate from the generator if there is any evidence of foreign matter.

As in the use of any radioactive material, care should be taken to minimize radiation exposure to the patient consistent with proper patient management and to insure minimum radiation exposure to occupational workers.

Radiopharmaceuticals should be used only by physicians who are qualified by training and experience in the safe use and handling of radionuclides and whose experience and training have been approved by the appropriate government agency authorized to license the use of radionuclides.

Carcinogenesis, Mutagenesis, Impairment of Fertility

No long-term studies have been performed to evaluate carcinogenic potential, mutagenicity potential, or to determine whether rubidium Rb 82 may affect fertility in males or females.

Pregnancy Category C

Animal reproductive studies have not been conducted with rubidium Rb 82. It is also not known whether rubidium Rb 82 can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. Rubidium Rb 82 should be given to pregnant women only if the expected benefits to be gained clearly outweigh the potential hazards.

Ideally, examinations using radiopharmaceuticals, especially those examinations which are elective in nature, in women of childbearing capability should be performed during the first few (approximately 10) days following the onset of menses.

Nursing Mothers

It is not known whether rubidium Rb 82 is excreted in human milk. Due to the short half-life of rubidium Rb 82 (75 sec) it is unlikely that the drug would be excreted in human milk during lactation. However, because many drugs are excreted in human milk, caution should be exercised when rubidium Rb 82 is administered to nursing women.

Pediatric Use

Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

No adverse reactions specifically attributable to rubidium Rb 82 have been reported during controlled clinical trials.

HOW SUPPLIED

Cardiogen-82 (Rubidium Rb 82 Generator) is supplied in the form of strontium Sr 82 adsorbed on a hydrous stannic oxide column with an activity of 90-150 millicuries Sr-82 at calibration time. The generator is encased in a lead shield surrounded by a labeled plastic container. Complete assay data for each generator are provided on the container label. Cardiogen-82 (Rubidium Rb 82 Generator) is intended for use only with an appropriate, properly calibrated infusion system labeled for use with the generator.

(J4-263)

600-501 Issued: March 1991

We've removed your PET collar

PET perfusion studies without a cyclotron

CardioGen-82® (Rubidium Rb 82 Generator) is the only generator-based myocardial perfusion agent indicated for PET imaging.

Now in 45 to 60 minutes you can have PET images to help you distinguish normal from abnormal myocardium. All without the expense of a cyclotron!

The short 75-second half-life lowers the radiation burden to the patient. When incorporated into the Rubidium Infusion System, serial imaging of myocardial blood flow changes can be performed as often as every ten minutes.

Rubidium-82
Infusion System

The CardioGen-82 System also improves patient throughput and scheduling efficiency by enabling you to perform multiple studies in a short time.

Remove the PET collar from your department. Get the PET images you need in 45 to 60 minutes, without a costly cyclotron.

CardioGen-82®
Rubidium Rb-82 Generator

Please see adjacent page for brief summary of prescribing information.

SQUIBB™ Diagnostics